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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/033,219 | 12/27/2001 | Wing-Chi Chow | M-12299 US | 7386 |

36257 7590 10/01/2004

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| EXAMINER |
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HARVEY, DAVID E

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2614

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/033,219 | Applicant(s) CHOW, WING-CHI | |
| | Examiner DAVID E HARVEY | Art Unit 2614 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/25/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Malkin et al. [US #6,614,474].

As shown in figure 1, Malkin et al. disclosed a system that comprised:

a) Scaling circuitry (@ 200) for downscaling fields/frames of video data; and

b) Edge detecting circuitry (@ 300) for detecting the slope of each pixel of the downscaled video signal (e.g. note 310-320 of figure 4).

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3. Claims 2-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al. for the reasons set forth for claim 1 above [US #6,614,474].

A) With respect to claims 2-4:

It is noted that the "CIF" format represents a progressively scanned format and therefor, by definition, comprises odd and even fields/lines;

B) With respect to claims 5 and 8:

As shown in figure 2, the horizontal interpolator/decimator (@ 240) averages up to 4 pixels from a line for each field pixel (i.e., wherein the "averaging" of pixel values constitutes, by definition, low-pass filtering)

C) With respect to claims 6, 7, 9, and 10:

As shown in figure 2, the vertical interpolator/decimator (@ 270) averages up to 4 sets of horizontally averaged pixels from successive lines for each field pixel (i.e., wherein the "averaging" of pixel values constitutes, by definition, low-pass filtering);

D) With respect to claims 11 and 12:

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As shown in figure 4, the edge detecting process performed by high-pass filtering elements 315-330 comprises a high-pass filtering operation for detecting "edges", wherein the filtered output is compared to a predetermined threshold (@ 335).

4. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al. [US #6,614,474] for the same reasons that were set forth for claim 1 above. The following is noted:

Malkin et al. disclosed a system that comprised:

a) A plurality of downscale circuits (@ 220 and 230 of figure 1) for downscaling fields/frames of video data; and

b) A plurality of edge detecting circuits (@ 320 of figure 4) each of which provides a respective one of the four outputs to selector (330).

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5. Claims 14-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al. for the reasons set forth for claim 13 above [US #6,614,474].

A) With respect to claims 14-16:

It is noted that the "CIF" format represents a progressively scanned format and therefor, by definition, comprises odd and even lines/lines;

B) With respect to claims 17 and 20:

As shown in figure 2, the horizontal interpolator/decimator (@ 240) averages up to 4 pixels from a line for each field pixel (i.e., wherein the "averaging" of pixel values constitutes, by definition, low-pass filtering)

C) With respect to claims 18, 19, 21, and 22:

As shown in figure 2, the vertical interpolator/decimator (@ 270) averages up to 4 sets of horizontally averaged pixels from successive lines for each field pixel (i.e., wherein the "averaging" of pixel values constitutes, by definition, low-pass filtering);

D) With respect to claims 23 and 24:

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As shown in figure 4, the edge detecting process performed by high-pass filtering elements 315-330 comprises a high-pass filtering operation for detecting "edges", wherein the filtered output is compared to a predetermined threshold (@ 335).

6. Claim 25 is rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al. [US #6,614,474] for the same reasons that were set forth for claim 1 above. The following is noted:

It is further noted that, in Malkin et al.:

a) Each of signals a1, a2, a3, b1, b2, b3, c1, c2, c3 that is shown @ 315 of figure 4 represents a respective set of downscaled field pixels, wherein there is at least a first second and this set; and

b) The edge detecting circuitry (@ 320 and 330) detects a maximum slope for the pixel location under consideration using said sets of downscaled filed pixels.

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7. Claims 26-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al. for the reasons set forth for claim 25 above [US #6,614,474].

A) With respect to claims 26 and 27:

It is noted each scaled set of pixels comprises a set of pixels surrounding the pixel/location being processed;

B) With respect to claims 28-33:

As shown in figure 2, the horizontal interpolator/decimator (@ 240) averages up to 4 pixels from a line for each field pixel (i.e., wherein the "averaging" of pixel values constitutes, by definition, low-pass filtering)

D) With respect to claims 35 and 35:


As shown in figure 4, the edge detecting process performed by high-pass filtering elements 315-330 comprises a high-pass filtering operation for detecting "edges", wherein the filtered output is compared to a predetermined threshold (@ 335).

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E HARVEY whose telephone number is (703) 305-4365. The examiner can normally be reached on M-F from 6AM to 3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DAVID E HARVEY
Primary Examiner
Art Unit 2614

DEH